

Chemical Compatibility Quick Reference Chart

Chemical Resistance Classification

- E** 30 days of constant exposure causes no damage. Plastic may even tolerate for years.
- G** Little or no damage after 30 days of constant exposure to the reagent.
- F** Some effect after 7 days of constant exposure to the reagent. Depending on the plastic, the effect may be crazing, cracking, loss of strength or discoloration. Solvents may cause softening, swelling and permeation losses with LDPE, HDPE, PP, PPCO and PMP. The solvent effects on these five resins are normally reversible; the part will usually return to its normal condition after evaporation.
- N** Not recommended for continuous use. Immediate damage may occur. Depending on the plastic, the effect will be a more severe crazing, cracking, loss of strength, discoloration, deformation, dissolution or permeation loss.

This information is only a summary. To access our chemical resistance database, go to:
www.nalgenelabware.com/techdata/chemical/index.asp

Resin Codes

ECTFE	Halar* ECTFE (ethylene-chlorotrifluoroethylene copolymer)
ETFE	Tefzel† ETFE (ethylene-tetrafluoroethylene)
FEP	Teflon† FEP (fluorinated ethylene propylene)
FLPE	fluorinated high-density polyethylene
FLPP	fluorinated polypropylene
HDPE	high-density polyethylene
LDPE	low-density polyethylene
PC	polycarbonate
PETG	polyethylene terephthalate copolyester
PFA	Teflon† PFA (perfluoroalkoxy)
PMMA	polymethyl methacrylate (acrylic)
PMP	polymethylpentene ("TPX")
PP	polypropylene
PPCO	polypropylene copolymer
PPO	polyphenylene oxide
PS	polystyrene
PSF	polysulfone
PUR	polyurethane
PVC	polyvinyl chloride
PVDF	polyvinylidene fluoride
ResMer	ResMer™ Manufacturing Technology
SAN	styrene acrylonitrile
TFE	Teflon† TFE (tetrafluoroethylene)
TPE	thermoplastic elastomer
XLPE	cross-linked high-density polyethylene

* Halar is a registered trademark of Solvay Solexis.

† Or equivalent.

Tefzel and Teflon are registered trademarks of DuPont.

Chemical Resistance Summary

Classes of Substances at 20°C	ECTFE/ETFE	FEP/TFE/PFA	FLPE	FLPP	HDPE	LDPE	PC	PETG	PMMA	PMP	PP/PPCO	PS	PSF	PUR	PVC (BOTTLE)	FLEXIBLE PVC TUBING*	PVDF	ResMer™	TPE***
Acids, dilute or weak	E	E	E	E	E	E	E	G	G	E	E	E	E	F	E	G	E	E	G
Acids,** strong and concentrated	E	E	G	G	G	G	N	N	N	E	G	F	G	N	G	F	E	G	F
Alcohols, aliphatic	E	E	E	E	E	E	G	G	N	E	E	G	G	N	G	F	E	E	E
Aldehydes	E	E	G	G	G	G	F	G	F	G	G	F	F	N	G	N	G	G	G
Bases/Alkali	E	E	F	E	E	E	N	N	F	E	E	E	E	F	E	F	G	E	F
Esters	G	E	G	G	G	G	N	F	N	E	G	N	N	N	N	N	G	F	N
Hydrocarbons, aliphatic	E	E	E	G	G	F	G	G	G	G	G	F	G	G	G	F	E	G	E
Hydrocarbons, aromatic	G	E	E	N	N	N	N	N	N	N	N	N	N	N	N	N	E	F	N
Hydrocarbons, halogenated	G	E	G	F	N	N	N	N	N	N	N	N	N	N	N	N	F	F	F
Ketones, aromatic	G	E	G	G	N	N	N	N	N	F	N	N	N	N	F	N	F	F	N
Oxidizing Agents, strong	E	E	F	F	F	F	F	F	N	G	F	G	G	N	G	F	G	G	N

* For tubing chemical resistance, other than PVC, see tubing section.

** Except for oxidizing acids: for oxidizing acids, see "Oxidizing Agents, strong."

*** TPE gaskets.